

Minutes from October 20th non-point workgroup meeting

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Minutes from non-point workgroup meeting of October 20, 2006

The meeting was held at the Piedmont Regional Office in Glen Allen, Virginia and commenced at 9:30 AM. The following persons were in attendance:

Scott Macomber	Angler Environmental
John Sheehan	Aqualaw
Jud White	Dominion
Paul Howard	Culpeper County
Ken Carter	NRCS
Shannon Varner	Troutman Sanders
Scott Reed	ESS
Jack Frye	DCR
Bill Keeling	DCR
Russ Perkinson	DCR
Russ Baxter	DCR
Steve Talley	DCR
Susan Block	DCR
Kristen Hughes	Chesapeake Bay Foundation
Sharon Conner	Hanover-Caroline SWCD
Bill Street	James River Association
Allan Brockenbrough	DEQ
Alan Pollock	DEQ
Kyle Winter	DEQ
Rachel Dawson	Ducks Unlimited
Brian Noyes	Colonial SWCD
Jim Wallace	Colonial SWCD
Kurt Stephenson	Virginia Tech
Cliff Randall	Virginia Tech
Wade Thomason	Virginia Tech
Ed Overton	VASWCD
Katie Frazier	Virginia Agribusiness Council
Dave Slack	DOF
Bud Nagelvoort	Lord Fairfax SWCD
Molly Pugh	Virginia Corn Growers Association
Darrell Marshall	VDACS

Kyle Winter of DEQ discussed the recent partnership agreement signed by EPA's Office of Water and NRCS regarding nutrient trading; while it had a number of promising components (including the commitment to a water quality credit trading pilot project in the Chesapeake Bay watershed), any product of this agreement would be (at best) parallel what this workgroup is attempting to accomplish. The agreement can be read online at <http://www.nrcs.usda.gov/news/pdf/wqtpartnershipagreement.pdf>.

Mr. Winter then began a discussion of the current draft of the non-point BMP approval guidance. Several questions were raised about the use of presumed BMP efficiency rates, which were taken from the Chesapeake Bay Model. EPA's Chesapeake Bay Program has recently let a contract to evaluate some (but not all) of the BMP efficiencies. It was suggested that the model be used as a benchmark with the allowed use of alternative efficiency rates if these alternative rates can be proven.

Bill Keeling of DCR discussed possible applications of these efficiency rates and showed several hypothetical examples of how reductions could be calculated (shown on the next two pages).

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The following examples are derived from the Beyond Baseline NPS offset credits straw man presented at the September 15, 2006 DEQ Technical Advisory Committee; they are meant to provide how credits might be determined, and are strictly for illustrative and discussion purposes.

Example: Farm located in the lower York River Watershed east of Interstate 95 (below the fall line). The farmer agrees to implement 100 acres of early cover crops instead of late planting the cover crop. The credits generated would be 100 acres multiplied by 2.86 lbs nitrogen/acre reduced equaling 286 lbs of NPS nitrogen offset credits generated.

Above Fall Line Early Planted Cover Crops			Below Fall Line Early Planted Cover Crops		
	TN lbs/yr	TP lbs/yr		TN lbs/yr	TP lbs/yr
E. Shore	NA	NA	E. Shore	2.50	NA
Potomac	3.56	NA	Potomac	1.77	NA
Rappahannock	2.22	NA	Rappahannock	2.92	NA
York	2.20	NA	York	2.86	NA
James	2.49	NA	James	1.88	NA

Example: Farm located in the Potomac River Watershed west of Interstate 95 (above the fall line). The farmer agrees to implement 50 acres of enhanced nutrient management instead of a regular nutrient management plan for those acres. The credits generated would be 50 acres multiplied by 1.79 lbs nitrogen/acre reduced equaling 89.5 lbs of NPS nitrogen offset credits generated.

Above Fall Line Enhanced Nutrient Mgt			Below Fall Line Enhanced Nutrient Mgt		
	TN lbs/yr	TP lbs/yr		TN lbs/yr	TP lbs/yr
E. Shore	NA	NA	E. Shore	0.78	NA
Potomac	1.79	NA	Potomac	0.30	NA
Rappahannock	1.08	NA	Rappahannock	1.51	NA
York	0.63	NA	York	1.20	NA
James	0.97	NA	James	0.64	NA

Example: Farm located in the upper James River Watershed west of Interstate 95 (above the fall line). The farmer agrees to implement 100 acres of continuous no-till instead of traditional conservation tillage methods. The nitrogen credits generated would be 100 acres multiplied by 0.67 lbs nitrogen/acre reduced equaling 67 lbs of NPS nitrogen offset credits generated. The phosphorus credits generated would be 100 acres multiplied by 0.63 lbs phosphorus/acre reduced equaling 63 lbs of NPS phosphorus offset credits generated.

Above Fall Line CT to CNT			Below Fall Line CT to CNT		
	TN lbs/yr	TP lbs/yr		TN lbs/yr	TP lbs/yr
E. Shore	NA	NA	E. Shore	0.51	0.28
Potomac	0.72	0.85	Potomac	0.36	0.08
Rappahannock	0.59	0.51	Rappahannock	0.49	0.23
York	0.58	0.35	York	0.45	0.20
James	0.67	0.63	James	0.31	0.19

Example: Farm located in the Potomac River Watershed west of Interstate 95 (above the fall line). The farmer agrees to increase the riparian grass buffers from 35 feet wide to 100 feet wide over a linear distance of 1000 feet. The acreage of the 35-foot wide buffer is approximately 0.80 acres ($1000 \text{ ft} \times 35 \text{ ft} = 35,000 \text{ ft}^2$, $35,000 \text{ ft}^2 / 43,560 \text{ ft}^2 \text{ per acre} = 0.80 \text{ acres}$). The acreage of the 100-foot wide buffer is approximately 2.3 acres. Therefore, the farmer has added approximately 1.5 acres of expanded buffer. The credits generated would be 1.5 acres multiplied by 1.19 lbs nitrogen/acre reduced equaling 1.78 lbs of NPS nitrogen offset credits generated.

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Above Fall Line Riparian Grass Buffers (cropland)

				TN lbs/yr	
>35'	E. Shore	Potomac	Rappahannock	York	James
36' to 50'	NA	0.43	0.58	0.47	0.36
51' to 75'	NA	0.87	1.16	0.95	0.72
76' to 100'	NA	1.19	1.59	1.31	1.00
101' to 125'	NA	1.52	2.03	1.66	1.27
126' to 150'	NA	1.74	2.32	1.90	1.45
151' to 175'	NA	1.85	2.46	2.02	1.54
176' to 200'	NA	2.06	2.75	2.26	1.73

Below Fall Line Riparian Grass Buffers (cropland)

				TN lbs/yr	
>35'	E. Shore	Potomac	Rappahannock	York	James
36' to 50'	0.20	0.32	0.56	0.43	0.33
51' to 75'	0.40	0.65	1.12	0.87	0.67
76' to 100'	0.55	0.89	1.54	1.20	0.92
101' to 125'	0.70	1.13	1.96	1.52	1.17
126' to 150'	0.80	1.29	2.24	1.74	1.34
151' to 175'	0.85	1.37	2.38	1.85	1.42
176' to 200'	0.95	1.54	2.66	2.06	1.59

These reduction rates represented pounds delivered to the Chesapeake Bay and were coarse reductions (above/below fall line as opposed to within an EPA-CBP model segment). Mr. Keeling explained that while the examples presented were coarse, CBP Model 4.3 has anomalies in some segments that would make it difficult to use; he added that Model 5.0 should remedy that.

The following points were made by workgroup members:

- The best information available should be used to develop the BMP efficiencies and removal rates;
- The quality of this information is in a state of flux, and the process should account for improvements in the science;
- The presumed efficiency rate for a given BMP did not account for site specific conditions such as land use, slope, soil type, and other specific conditions, and that some other metric (such as the soil condition index) might be a better indicator of nutrient transport from a given site

There were some questions on how removal rates for buffers were calculated. Mr. Keeling explained that after reductions from the baseline BMPs were accounted for, the additional filtration and uptake achieved by the additional buffer were less than the load reductions that were achieved by simply taking land out of production to create the buffer, which served as a small-scale land conversion.

Mr. Winter stated that both detailed and coarse reduction calculations should be viable options; the question for both remained how to submit, review, approve and verify the reductions.

Continuing the discussion of the proposed guidance; most of the DCR policy paper was integrated into this guidance, with the requirements for agricultural BMPs in a tabular format. Most of the workgroup favored this over a narrative, with the exception of the baseline BMP requirements. It was agreed that the format could lend itself to BMPs on developed land (again, with the exception of baseline requirements), but that land conversion should be kept as narrative. It should also be noted that the table of beyond-baseline practices is not intended to be all-inclusive, and that the timing of BMP verification was as important as the frequency.

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A workgroup member questioned why the tributary strategy baseline for conservation tillage included an average crop residue cover of 30%, while the “beyond baseline” started at 60%. It was explained that the baseline represented a pure minimum, the “beyond baseline” represented what has historically been defined as “no-till”, and that the difference between these values could be traded as a nutrient reduction.

Another workgroup member asked whether the planting of a cover crop counted as a reduction in the year the crop was planted, or in which it was killed off. It was determined that it should be counted for the year in which the cover crop was killed off, as the crop’s management (harvested for feed during drought conditions) could not be predicted at the time of planting.

The table will be revised to account for the comments received at the meeting.

Regarding BMPs on developed lands, it was noted that this applied to retrofits, not new construction. There was support for the view that if a developer installed BMPs during new construction, the developer should be able to receive credits because he has gone beyond the baseline and has installed BMPs that will reduce nutrient pollution beyond what he was required to do and that this is environmentally beneficial. As new construction should be subject to a number of requirements for BMP implementation (perhaps not consistently enforced in all jurisdictions), it would be difficult for someone to go “beyond” baseline if they already were doing what was required.

The means of submitting reductions was discussed, and a document called the “Chesapeake Bay Tributary Nutrient Reduction Certificate” was presented to the workgroup. A land owner (or his/her representative) submitting this document would provide sufficient information on the proposed BMPs for the site to be uniquely identified and for the reductions claimed to be verified (maps and reduction calculations would be provided as attachments); the document would also include the necessary certifications by the land owner, VPDES permittee (who would be the ultimate user of the reductions) and intermediaries such as an aggregator or bank.

Suggestions regarding this form follow:

- The means of submittal, transfer and review of this document should be as “modern” as possible;
- Who performs the review and inspection? For some of these BMPs, the SWCD or NRCS may have to be involved; how would they recover costs? (it was noted that while this program was likely to bring in new “customers”, some of these reviews and inspections would be concurrent with other work on a given site; it was also noted that some SWCDs have working arrangements with localities to perform certain services, and that when the locality was the end user of the reductions achieved by the BMP, the SWCD could possibly work the review into this arrangement);
- How would anyone verify that BMPs on the site are currently funded by state or federal grants?
- The certification for the landowner is far too intrusive (it was pointed out that ultimate liability remained with the VPDES permittee); some changes will be needed to this language to make landowners willing to undertake this, and a great deal of outreach will be necessary to support it.

After reiterating the guidance development process and opening the floor to public comment (none received), Mr. Winter adjourned the meeting.